

12.0 DATA VALIDATION PROCEDURES

12.0.0.1. As described in Section 3.0, the quality of the field and analytical data shall be evaluated using the PARCC parameters, which are quantitative and qualitative statements that describe data quality. The PARCC parameters shall be used to determine whether the data quality objectives for any given project have been met by comparing QC sample results and standard procedures with acceptance criteria established for a specific project. The PARCC parameters that shall be used for data evaluation are defined in Section 3.0. Data assessment will be conducted in accordance with Q4/G-9 (January 1998) and as described in the project specific work plan.

12.1 FIELD DATA

12.1.0.1. Field measurement data shall be assessed by the Prime Contractor's QAO or designee. Although field data are considered screening level, some field data will be used definitively (lithology data, pH data, groundwater elevation measurement data, etc). There shall be no formal data validation for screening data, which also includes field data; however, the field data shall be evaluated qualitatively in terms of the PARCC parameters as described in Section 3.0 and in Section 9.0. Data shall be assessed in accordance with QA/G-9 (January 1998) and as described in the project specific work plan.

12.2 LABORATORY DATA

12.2.0.1. Definitive data shall be validated by the Prime Contractor based on the assumption that the samples were collected, handled, and analyzed according to the project-specific work plans and this QAPP. The data reviewer shall identify any data omissions or data that do not meet the quality control criteria. During the validation process, the reviewer also shall interact with the laboratory to correct any data deficiencies. Decisions to repeat sample collection or analyses shall be made by the Hill

AFB project manager based on whether the DQOs were met. At a minimum, an assessment of the data, shall be conducted to determine if data parameters, including standard deviation and variance are in accordance with the values estimated in the development of the DQOs and sampling plan. Results of the data validation shall be presented in an appendix to the report that summarizes sampling results.

12.2.1. Laboratory Data Validation Procedures

12.2.1.1. Principles used for data validation outlined in the *U.S. EPA Contract Laboratory Program National Functional Guidelines for Organic and Inorganic Data Review* (Functional Guidelines) (U.S. EPA, February 1994) will be used as a basis for validation of definitive data. For all data from those methodologies not included in the Functional Guidelines, data validation shall be based on the results of QC sample analysis, sample holding time evaluation, and the basic principles for data validation outlined in the Functional Guidelines (e.g., method blank contamination). The QC data used for definitive data validation are listed in Table 3-4; Table 3-5 defines how the QC samples shall be used to assess PARCC parameters. In addition, the instrument calibration logs and injection logs shall be reviewed for compliance with this QAPP and the analytical methods.

12.2.1.2. Based on the data validation, the Prime Contractor shall apply any other data qualification flags as deemed appropriate. The data qualification flags are shown on Table 12-1. For example, a matrix spike sample would be qualified by the laboratory if there was matrix interference during analysis, while the Prime Contractor would apply the final qualifying flag to the data for the parent sample. The data qualifiers that shall be used are listed in Table 12-1.

TABLE 12-1
INDEPENDENT REVIEW DATA QUALIFIERS

Qualifier	Description
B	Analyte is detected in an associated blank.
UB	Analyte is not detected at or above the indicated concentration due to blank contamination.
UK	Analyte is not detected at or above the indicated concentration based on the data validation.
UJ	Possible false negative result due to related QC problems.
J	Result is estimated based due to associated QC problems.
R	Data are considered unusable based on the results of the data validation and/or field procedures evaluation.